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RAW SEQUENCE LISTING   DATE: 07/30/2004
PATENT APPLICATION: US/10/623,036   TIME: 14:07:48

Input Set : **N:\Crf3\RULE60\10623036.raw**
Output Set: **N:\CRF4\07302004\J623036.raw**

SEQUENCE LISTING
```
 3 (1) GENERAL INFORMATION:
 5        (i) APPLICANT: Stemmer, Willem P.C.
 6                       Crameri, Andreas
 8       (ii) TITLE OF INVENTION: DNA Mutagenesis by Random Fragmentation
 9                                and Reassembly
11      (iii) NUMBER OF SEQUENCES: 62
13       (iv) CORRESPONDENCE ADDRESS:
14            (A) ADDRESSEE: Townsend and Townsend and Crew LLP
15            (B) STREET: Two Embarcadero Center, 8th Floor
16            (C) CITY: San Francisco
17            (D) STATE: CA
18            (E) COUNTRY: USA
19            (F) ZIP: 94111
21        (v) COMPUTER READABLE FORM:
22            (A) MEDIUM TYPE: Floppy disk
23            (B) COMPUTER: IBM PC compatible
24            (C) OPERATING SYSTEM: PC-DOS/MS-DOS
25            (D) SOFTWARE: PatentIn Release #1.0, Version #1.30
27       (vi) CURRENT APPLICATION DATA:
C--> 28       (A) APPLICATION NUMBER: US/10/623,036
C--> 29       (B) FILING DATE: 18-Jul-2003
W--> 35       (C) CLASSIFICATION: 435
C--> 36     (vii) PRIOR APPLICATION DATA:
W--> 33       (A) APPLICATION NUMBER: US/08/537,874
     34       (B) FILING DATE: 04-MAR-1996
W--> 37       (A) APPLICATION NUMBER: EP PCT/US95/02126
     38       (B) FILING DATE: 17-FEB-1995
W--> 40       (A) APPLICATION NUMBER: US 08/198,431
     41       (B) FILING DATE: 17-FEB-1994
C--> 43    (viii) ATTORNEY/AGENT INFORMATION:
     44       (A) NAME: Liebeschuetz, Joe
     45       (B) REGISTRATION NUMBER: 37,505
     46       (C) REFERENCE/DOCKET NUMBER: 018097-014610
C--> 48      (ix) TELECOMMUNICATION INFORMATION:
     49       (A) TELEPHONE: 415-576-0200
     50       (B) TELEFAX: 415-576-0300
     53 (2) INFORMATION FOR SEQ ID NO: 1:
     55        (i) SEQUENCE CHARACTERISTICS:
     56            (A) LENGTH: 20 base pairs
     57            (B) TYPE: nucleic acid
     58            (C) STRANDEDNESS: single
     59            (D) TOPOLOGY: linear
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65     (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 1:
67 AAAGCGTCGA TTTTTGTGAT                                      20
69 (2) INFORMATION FOR SEQ ID NO: 2:
71      (i) SEQUENCE CHARACTERISTICS:
72          (A) LENGTH: 20 base pairs
73          (B) TYPE: nucleic acid
74          (C) STRANDEDNESS: single
75          (D) TOPOLOGY: linear
81     (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 2:
83 ATGGGGTTCC GCGCACATTT                                      20
85 (2) INFORMATION FOR SEQ ID NO: 3:
87      (i) SEQUENCE CHARACTERISTICS:
88          (A) LENGTH: 18 base pairs
89          (B) TYPE: nucleic acid
90          (C) STRANDEDNESS: single
91          (D) TOPOLOGY: linear
97     (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 3:
99 TTAGGCACCC CAGGCTTT                                        18
101 (2) INFORMATION FOR SEQ ID NO: 4:
103      (i) SEQUENCE CHARACTERISTICS:
104          (A) LENGTH: 18 base pairs
105          (B) TYPE: nucleic acid
106          (C) STRANDEDNESS: single
107          (D) TOPOLOGY: linear
113     (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4:
115 ATGTGCTGCA AGGCGATT                                       18
117 (2) INFORMATION FOR SEQ ID NO: 5:
119      (i) SEQUENCE CHARACTERISTICS:
120          (A) LENGTH: 29 base pairs
121          (B) TYPE: nucleic acid
122          (C) STRANDEDNESS: single
123          (D) TOPOLOGY: linear
129     (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 5:
131 AACGCCGCAT GCAAGCTTGG ATCCTTATT                           29
133 (2) INFORMATION FOR SEQ ID NO: 6:
135      (i) SEQUENCE CHARACTERISTICS:
136          (A) LENGTH: 30 base pairs
137          (B) TYPE: nucleic acid
138          (C) STRANDEDNESS: single
139          (D) TOPOLOGY: linear
145     (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 6:
147 AAAGCCCTCT AGATGATTAC GAATTCATAT                          30
149 (2) INFORMATION FOR SEQ ID NO: 7:
151      (i) SEQUENCE CHARACTERISTICS:
152          (A) LENGTH: 46 base pairs
153          (B) TYPE: nucleic acid
154          (C) STRANDEDNESS: single
155          (D) TOPOLOGY: linear
161     (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 7:
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163 TTCTATTGAC GGCCTGTCAG GCCTCATATA TACTTTAGAT TGATTT                     46
165 (2) INFORMATION FOR SEQ ID NO: 8:
167      (i) SEQUENCE CHARACTERISTICS:
168          (A) LENGTH: 56 base pairs
169          (B) TYPE: nucleic acid
170          (C) STRANDEDNESS: single
171          (D) TOPOLOGY: linear
177      (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 8:
179 TTGACGCACT GGCCATGGTG GCCAAAAATA AACAAATAGG GGTTCCGCGC ACATTT         56
181 (2) INFORMATION FOR SEQ ID NO: 9:
183      (i) SEQUENCE CHARACTERISTICS:
184          (A) LENGTH: 45 base pairs
185          (B) TYPE: nucleic acid
186          (C) STRANDEDNESS: single
187          (D) TOPOLOGY: linear
193      (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 9:
195 AACTGACCAC GGCCTGACAG GCCGGTCTGA CAGTTACCAA TGCTT                      45
197 (2) INFORMATION FOR SEQ ID NO: 10:
199      (i) SEQUENCE CHARACTERISTICS:
200          (A) LENGTH: 44 base pairs
201          (B) TYPE: nucleic acid
202          (C) STRANDEDNESS: single
203          (D) TOPOLOGY: linear
209      (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 10:
211 AACCTGTCCT GGCCACCATG GCCTAAATAC ATTCAAATAT GTAT                       44
213 (2) INFORMATION FOR SEQ ID NO: 11:
215      (i) SEQUENCE CHARACTERISTICS:
216          (A) LENGTH: 31 base pairs
217          (B) TYPE: nucleic acid
218          (C) STRANDEDNESS: single
219          (D) TOPOLOGY: linear
225      (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 11:
227 AGTTGGGTGG ACGAGTGGGT TACATCGAAC T                                    31
229 (2) INFORMATION FOR SEQ ID NO: 12:
231      (i) SEQUENCE CHARACTERISTICS:
232          (A) LENGTH: 33 base pairs
233          (B) TYPE: nucleic acid
234          (C) STRANDEDNESS: single
235          (D) TOPOLOGY: linear
241      (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 12:
243 AACCCACTCG TCCACCCAAC TGATCTTCAG CAT                                  33
245 (2) INFORMATION FOR SEQ ID NO: 13:
247      (i) SEQUENCE CHARACTERISTICS:
248          (A) LENGTH: 41 base pairs
249          (B) TYPE: nucleic acid
250          (C) STRANDEDNESS: single
251          (D) TOPOLOGY: linear
257      (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 13:
259 AGTAAAAGAT GCTGAAGATA AGTTGGGTGC ACGAGTGGGT T                         41
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261 (2) INFORMATION FOR SEQ ID NO: 14:
263   (i) SEQUENCE CHARACTERISTICS:
264   (A) LENGTH: 24 base pairs
265   (B) TYPE: nucleic acid
266   (C) STRANDEDNESS: single
267   (D) TOPOLOGY: linear
273   (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 14:
275 ACTTATCTTC AGCATCTTTT ACTT   24
277 (2) INFORMATION FOR SEQ ID NO: 15:
279   (i) SEQUENCE CHARACTERISTICS:
280   (A) LENGTH: 32 base pairs
281   (B) TYPE: nucleic acid
282   (C) STRANDEDNESS: single
283   (D) TOPOLOGY: linear
289   (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 15:
291 AAGAGCAACT CAGTCGCCGC ATACACTATT CT   32
293 (2) INFORMATION FOR SEQ ID NO: 16:
295   (i) SEQUENCE CHARACTERISTICS:
296   (A) LENGTH: 36 base pairs
297   (B) TYPE: nucleic acid
298   (C) STRANDEDNESS: single
299   (D) TOPOLOGY: linear
305   (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 16:
307 ATGGCGGCGA CTGAGTTGCT CTTGCCCGGC GTCAAT   36
309 (2) INFORMATION FOR SEQ ID NO: 17:
311   (i) SEQUENCE CHARACTERISTICS:
312   (A) LENGTH: 42 base pairs
313   (B) TYPE: nucleic acid
314   (C) STRANDEDNESS: single
315   (D) TOPOLOGY: linear
321   (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 17:
323 TATTCTCAGA ATGACTTGGT TAAGTACTCA CCAGTCACAG AA   42
325 (2) INFORMATION FOR SEQ ID NO: 18:
327   (i) SEQUENCE CHARACTERISTICS:
328   (A) LENGTH: 22 base pairs
329   (B) TYPE: nucleic acid
330   (C) STRANDEDNESS: single
331   (D) TOPOLOGY: linear
337   (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 18:
339 TTAACCAAGT CATTCTGAGA AT   22
341 (2) INFORMATION FOR SEQ ID NO: 19:
343   (i) SEQUENCE CHARACTERISTICS:
344   (A) LENGTH: 36 base pairs
345   (B) TYPE: nucleic acid
346   (C) STRANDEDNESS: single
347   (D) TOPOLOGY: linear
353   (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 19:
355 AACGACGAGC GTGACACCAC GACGCCTGTA GCAATG   36
357 (2) INFORMATION FOR SEQ ID NO: 20:

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359    (i) SEQUENCE CHARACTERISTICS:
360          (A) LENGTH: 22 base pairs
361          (B) TYPE: nucleic acid
362          (C) STRANDEDNESS: single
363          (D) TOPOLOGY: linear
369    (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 20:
371 TCGTGGTGTC ACGCTCGTCG TT                                    22
373 (2) INFORMATION FOR SEQ ID NO: 21:
375    (i) SEQUENCE CHARACTERISTICS:
376          (A) LENGTH: 42 base pairs
377          (B) TYPE: nucleic acid
378          (C) STRANDEDNESS: single
379          (D) TOPOLOGY: linear
385    (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 21:
387 TTGCTGATAA ATCTGGAGCC AGTGAGCGTG GGTCTCGCGG TA              42
389 (2) INFORMATION FOR SEQ ID NO: 22:
391    (i) SEQUENCE CHARACTERISTICS:
392          (A) LENGTH: 21 base pairs
393          (B) TYPE: nucleic acid
394          (C) STRANDEDNESS: single
395          (D) TOPOLOGY: linear
401    (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 22:
403 TGGCTCCAGA TTTATCAGCA A                                     21
405 (2) INFORMATION FOR SEQ ID NO: 23:
407    (i) SEQUENCE CHARACTERISTICS:
408          (A) LENGTH: 30 base pairs
409          (B) TYPE: nucleic acid
410          (C) STRANDEDNESS: single
411          (D) TOPOLOGY: linear
417    (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 23:
419 ATGCTCACTG GCTCCAGATT TATCAGCAAT                            30
421 (2) INFORMATION FOR SEQ ID NO: 24:
423    (i) SEQUENCE CHARACTERISTICS:
424          (A) LENGTH: 36 base pairs
425          (B) TYPE: nucleic acid
426          (C) STRANDEDNESS: single
427          (D) TOPOLOGY: linear
433    (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 24:
435 TCTGGAGCCA GTGAGCATGG GTCTCGCGGT ATCATT                     36
437 (2) INFORMATION FOR SEQ ID NO: 25:
439    (i) SEQUENCE CHARACTERISTICS:
440          (A) LENGTH: 70 base pairs
441          (B) TYPE: nucleic acid
442          (C) STRANDEDNESS: single
443          (D) TOPOLOGY: linear
449    (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 25:
451 AACCTGTCCT GGCCACCATG GCCTAAATAC AATCAAATAT GTATCCGCTT ATGAGACAAT   60
453 AACCCTGATA                                                  70
455 (2) INFORMATION FOR SEQ ID NO: 26:
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VERIFICATION SUMMARY   DATE: 07/30/2004
PATENT APPLICATION: **US/10/623,036**   TIME: 14:07:49

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L:28 M:220 C: Keyword misspelled or invalid format, [(A) APPLICATION NUMBER:]
L:29 M:220 C: Keyword misspelled or invalid format, [(B) FILING DATE:]
L:35 M:238 W: Alpha Fields not Ordered, Reordered [(C) CLASSIFICATION:] of (1)(vi)
L:36 M:220 C: Keyword misspelled or invalid format, [(vii) PRIOR APPLICATION DATA:]
L:40 M:238 W: Alpha Fields not Ordered, Reordered [(A) APPLICATION NUMBER:] of (1)(vii)
L:43 M:220 C: Keyword misspelled or invalid format, [(viii) ATTORNEY/AGENT INFORMATION:]
L:48 M:220 C: Keyword misspelled or invalid format, [(ix) TELECOMMUNICATION INFORMATION:]
L:1093 M:246 W: Invalid value of Alpha Sequence Header Field, [TOPOLOGY:], SeqNo=62
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